BRUHAT BANAGLORE MAHANAGARA PALIKE

Executive Engineer-Yelhanka Division

Detailed Estimate

Name of Work: Improvements to roads ,drains and footpath in areas around to Sambramha engineering college, Sainagara Ambabhavani layout and other areas in ward no. 03 Yelhanka Satellite town subdivision

			Estimate Amount : 9500000.00						
Sl. No.	Particulars	Unit / Rate	Nos	L in m	B in m	D in m	Quantity	Rate in Rs	Total Amount in Rs
	CIVIL WORKS								
1	KSRRB 300-1. **Earthwork excavation by manual means** in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 1.5 m, excavated surface leveled and sides neatly dressed, the disposed earth to be leveled neatly after breaking of clods complete as per specifications. MORTH / Chapter 3 **(Page No141., I.No.19.1 of KPWD S.R 2015-16).**								
		Cum							
	New Culverts								
	Rajiv gandhi nagar main road from 1st main to end road								
			1	5.7	2.00	0.700	7.98		
	Slum board road from Rajivgandhinagar to slum board main road								
	Ch: (0 - 124)								
			1	7.7	2.00	0.700	10.78		
	From Sambrama college road opp to end road								
	Ch: (0 - 310)								
			1	5.1	2.00	0.700	7.14		
	Desilting								
	Slum board road from Rajivgandhinagar to slum board main road								
	Ch: (0 - 124)								
	Ch: (0 - 124)		2	124	0.60	0.600	89.28		
	Cross road-1								
	Ch: (0 - 87)		2	87	0.60	0.600	62.64		
	Ch: (0 - 21)		2	21	0.60	0.600	15.12		
	From Sambrama college road opp to end road								
	Ch: (0 - 310)								
	Ch: (0 - 310)		2	310	0.60	0.700	260.40		
	1st main from ambabhavani layout								
	Ch: (0 - 358)								
	Ch: (0 - 358)		2	358	0.60	0.700	300.72		
							754.06	**177.88**	**134132.19**
2	KSRB 4-1.2 : Providing and laying in **position plain cement concrete of mix1:3:6** with OPC cement @ 220kgs, with 40mm and down size graded granite metal coarse aggregates @0.892cum and fine aggregtes @ 0.465cum machine mixed, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted,in foundation including cost of all materials, labour, HOM of machinery, curing complete as per specifications.Specification No. KBS 4.1, 4.2 **(Page No 12., I.No.4.2 of KPWD S.R 2015-16).**								

Sl. No.	Particulars	Unit / Rate	Nos	L in m	B in m	D in m	Quantity	Rate in Rs	Total Amount in Rs
		Cum							
	New Culverts								
	Rajiv gandhi nagar main road from 1st main to end road								
			1	5.7	1.50	0.100	0.86		
	Slum board road from Rajivgandhinagar to slum board main road								
	Ch: (0 - 124)								
			1	7.7	1.50	0.100	1.16		
	From Sambrama college road opp to end road								
	Ch: (0 - 310)								
			1	5.1	1.50	0.100	0.77		
							2.78	**5236.92**	**14532.45**
3	Providing and laying Plain /reinforced cement concrete **M20** for Box drain walls of thickness 10cm to 20cm including centring shuttering for work etc. complete as per approved drawing and design MORTH specification No.1500,1700,2200 **(Page No258., I.No.37.59.2 of KPWD S.R 2015-16).**								
		Cum							
	Raft								
	New Culverts								
	Rajiv gandhi nagar main road from 1st main to end road								
			1	5.7	1.80	0.200	2.05		
	Slum board road from Rajivgandhinagar to slum board main road								
	Ch: (0 - 124)								
			1	7.7	1.80	0.200	2.77		
	From Sambrama college road opp to end road								
	Ch: (0 - 310)								
			1	5.1	1.80	0.200	1.84		
	Wall								
	New Culverts								
	Rajiv gandhi nagar main road from 1st main to end road								
			2	5.7	0.20	0.900	2.05		
	Slum board road from Rajivgandhinagar to slum board main road								
	Ch: (0 - 124)								
			2	7.7	0.20	0.900	2.77		
	From Sambrama college road opp to end road								
	Ch: (0 - 310)								
			2	5.1	0.20	0.900	1.84		
							13.32	**6931.44**	**92326.78**

Sl. No.	Particulars	Unit / Rate	Nos	L in m	B in m	D in m	Quantity	Rate in Rs	Total Amount in Rs
4	KSRB 4.9.2 : Providing **T .M.T steel reinforcement** for R.C.C work including straightening, cutting, bending, hooking, placing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as per specifications. Specification No. KBS 4.6.3 for TMT Bars Fe500 **(Page No 17., I.No.4.46.2 of KPWD S.R 2015-16).**								
		Tonne							
	Taking 60kg/m3								
				13.32*60/1000			0.80		
							0.80	**69805.80**	**55788.80**
5	Providing precast slab of 250mm thick including cost of all materials, labour, curing,transportation,loading ,unloading,etc.,complete as per the direction of engineer in charge- Data rate								
		Sqm							
	New Slabs								
	New Culverts								
	Rajiv gandhi nagar main road from 1st main to end road								
			1	5.7	1.80		10.26		
	Slum board road from Rajivgandhinagar to slum board main road								
	Ch: (0 - 124)								
			1	7.7	1.80		13.86		
	From Sambrama college road opp to end road								
	Ch: (0 - 310)								
			1	5.1	1.80		9.18		
							33.30	**5111.00**	**170196.30**
	ROAD WORKS								
6	KSRRB M300-14. **Excavation for roadwork in all type of soil with hydraulic excavator** of 0.9 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to the embankment location to a lead of 1.00 km and complete as per specifications. MORTH Specification No.301 **(Page No 142., I.No.19.14 of KPWD S.R 2015-16).**								
		Cum							
	Rajiv gandhi nagar main road from 1st main to end road								
	Ch: (0 - 32)		1	32	4.20	0.375	50.40		
	Ch: (0 - 47)		1	47	4.00	0.375	70.50		
	Slum board road from Rajivgandhinagar to slum board main road								
	Ch: (0 - 124)								
	Ch: (0 - 124)		1	124	7.00	0.425	368.90		
	Cross road-1								
	Ch: (0 - 87)		1	87	5.50	0.425	203.36		
	Ch: (0 - 21)		1	21	5.00	0.425	44.63		
	From Sambrama college road opp to end road								
	Ch: (0 - 310)								

Sl. No.	Particulars	Unit / Rate	Nos	L in m	B in m	D in m	Quantity	Rate in Rs	Total Amount in Rs
	Ch: (0 - 310)		1	310	5.50	0.425	724.63		
	1st main from ambabhavani layout								
	Ch: (0 - 358)								
	Ch: (0 - 358)		1	358	6.40	0.425	973.76		
							2436.17	143.32	349152.24
7	KSRRB 300-58. Compaction of original ground with maximum of 6 passes of 8 to 10 tonnes power roller including filling in depression occuring during rolling including cost of all labour, HOM of machinery complete as per specifications. MORTH / Chapter 3 (Page No 148., I.No.19.64 of KPWD S.R 2015-16).								
		Sqm							
	Rajiv gandhi nagar main road from 1st main to end road								
	Ch: (0 - 32)		1	32	4.20		134.40		
	Ch: (0 - 47)		1	47	4.00		188.00		
	Slum board road from Rajivgandhinagar to slum board main road								
	Ch: (0 - 124)								
	Ch: (0 - 124)		1	124	7.00		868.00		
	Cross road-1								
	Ch: (0 - 87)		1	87	5.50		478.50		
	Ch: (0 - 21)		1	21	5.00		105.00		
	From Sambrama college road opp to end road								
	Ch: (0 - 310)								
	Ch: (0 - 310)		1	310	5.50		1705.00		
	1st main from ambabhavani layout								
	Ch: (0 - 358)								
	Ch: (0 - 358)		1	358	6.40		2291.20		
							5770.10	4.86	28042.69
8	KSRRB M400-6.1. Construction of **granular sub-base** by providing close graded material, mixing in a mechaical mix plant at OMC, carriage of mixed material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications. A. Plant Mix Method.Close graded granular sub-base material as per 400-1 For Grading- II Material **(Page No 154., I.No.20.4.2 of KPWD S.R 2015-16).**								
		Cum							
	Rajiv gandhi nagar main road from 1st main to end road								
	Ch: (0 - 32)		1	32	4.20	0.150	20.16		
	Ch: (0 - 47)		1	47	4.00	0.150	28.20		
	Slum board road from Rajivgandhinagar to slum board main road								
	Ch: (0 - 124)								
	Ch: (0 - 124)		1	124	7.00	0.150	130.20		
	Cross road-1								
	Ch: (0 - 87)		1	87	5.50	0.150	71.78		
	Ch: (0 - 21)		1	21	5.00	0.150	15.75		

Sl. No.	Particulars	Unit / Rate	Nos	L in m	B in m	D in m	Quantity	Rate in Rs	Total Amount in Rs
	From Sambrama college road opp to end road								
	Ch: (0 - 310)								
	Ch: (0 - 310)		1	310	5.50	0.150	255.75		
	1st main from ambabhavani layout								
	Ch: (0 - 358)								
	Ch: (0 - 358)		1	358	6.40	0.150	343.68		
							865.52	1622.16	1404003.81
9	KSRRB M600-1. Construction of **dry lean cement concrete mix M5** with OPC cement @160Kgs, with 25mm and down size graded granite metal coarse aggregate at 0.86cum and fine aggregates @ 0.58cum Sub- base over a prepared sub-grade with (coarse and fine aggregate conforming to IS: 383,) aggregate cement ratio not to exceed 15:1,aggregate gradation after blending to be as per Table 600-1, cement content not to be less than 160 kg/ cum, optimum moisture content to be determined during trial length construction, concrete strength not to be less than 10 Mpa at 7 days, mixed in a batching plant, transported to site, laid with a paver with electronic sensor, compacting with 8-10 tonnes vibratory roller, finishing and curing complete as per specifications. MORTH Specification No. 601 (Page No,-173, I.No.22.1 of KPWD S.R 2015-16)								
		Cum							
	Rajiv gandhi nagar main road from 1st main to end road								
	Ch: (0 - 32)		1	32	4.20	0.100	13.44		
	Ch: (0 - 47)		1	47	4.00	0.100	18.80		
							32.24	3900.96	125766.95
10	Cement concrete pavement.Construction of **un-reinforced plain cement concrete** pavement, thickness as per design, over a prepared sub base with OPC cement or any other type as per clause 1051.2.2 **design mix M30**(at 360 kg per cum coarse aggregate @ 0.69 cum and fine aggregate @0.46 cum) , with 25mm and down size graded granite metal coarse aggregates and fine aggregtes , with superplastisiser @3lts confirming to IS9103-1999 eaffirmed-2008 , mixed in a concrete mixer of not less than 0.6 cum capacity and appropriate weigh batcher as per approved mix design, laid in approved fixed side form work (steel channel, laying and fixing of 125 micron thick polythene film, wedges, steel plates including levelling the form work as per drawing). Spreading the concrete with shovels, rackers compacted using needle, screed and plate vibrator and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints, joint filler, separation membrane, selant primer, joint sealant, admixtures as approved, curing compound, finishing to lines and grades as per drawing complete as per specifications.(Page No 174., I.No.22.6.1 of KPWD S.R 2015-16).								
		Cum							
	Rajiv gandhi nagar main road from 1st main to end road								
	Ch: (0 - 32)		1	32	4.20	0.150	20.16		
	Ch: (0 - 47)		1	47	4.00	0.150	28.20		
							48.36	5957.28	288094.06

Sl. No.	Particulars	Unit / Rate	Nos	L in m	B in m	D in m	Quantity	Rate in Rs	Total Amount in Rs
11	Providing **groove cutting** for Concrete pavement width of 5mm to 10mm and depth 80mm-100mm including cost of cutting machine, generator & HOM of machinery, including cost of blade,coolant etc., including cleaning of groove & providing sand and hot bitumen fillars, and filler metal etc., including cost of conveyance of all materials, labour, lead and lift charges and all other incidental charges as per drawing and as per specifications.**(Page No 172., I.No.22.8.1 of KPWD S.R 2015-16).**								
		m							
	LONGITUDINAL								
	Rajiv gandhi nagar main road from 1st main to end road								
	Ch: (0 - 32)		1	32			32.00		
	Ch: (0 - 47)		1	47			47.00		
	LATERAL								
	Rajiv gandhi nagar main road from 1st main to end road								
	Ch: (0 - 32)		9	4.2			37.80		
	Ch: (0 - 47)		13	4			52.00		
							168.80	**124.20**	**20964.96**
12	KSRRB M400-17. Providing, laying, spreading and compacting graded stones aggregate to wet mix macadam specifications including pre mixing the material with water at OMC in mechanical mix plant carriage of mixed method of tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per specifications. MORTH Specification No. 406 (Page No 157., I.No.20.18 of KPWD S.R 2015-16).								
		Cum							
	Slum board road from Rajivgandhinagar to slum board main road								
	Ch: (0 - 124)								
	Ch: (0 - 124)		1	124	7.00	0.225	195.30		
	Cross road-1								
	Ch: (0 - 87)		1	87	5.50	0.225	107.66		
	Ch: (0 - 21)		1	21	5.00	0.225	23.63		
	From Sambrama college road opp to end road								
	Ch: (0 - 310)								
	Ch: (0 - 310)		1	310	5.50	0.225	383.63		
	1st main from ambabhavani layout								
	Ch: (0 - 358)								
	Ch: (0 - 358)		1	358	6.40	0.225	515.52		
							1225.73	**1713.96**	**2100856.48**
13	KSRRB M500-6. Providing and applying primer coat with S.S. bitumen emulsion on prepared surface of granular base such as WBM,WMM ,including clearing of road surface and spraying primer at the rate of 0.60 kg / sqm using mechanical means complete as per Specifications. MORTH Specification No. 502 (Page No 160., I.No.21.6 of KPWD S.R 2015-16).								
		Sqm							
	Slum board road from Rajivgandhinagar to slum board main road								
	Ch: (0 - 124)								
	Ch: (0 - 124)		1	124	7.00		868.00		

Sl. No.	Particulars	Unit / Rate	Nos	L in m	B in m	D in m	Quantity	Rate in Rs	Total Amount in Rs
	Cross road-1								
	Ch: (0 - 87)								
	Ch: (0 - 21)		1	87	5.50		478.50		
	From Sambrama college road opp to end road		1	21	5.00		105.00		
	Ch: (0 - 310)								
	Ch: (0 - 310)		1	310	5.50		1705.00		
	1st main from ambabhavani layout								
	Ch: (0 - 358)								
	Ch: (0 - 358)		1	358	6.40		2291.20		
							5447.70	**32.40**	**176505.48**
14	KSRRB 500-7. Providing and applying **tack coat** using 80/100 grade Bitumen (VG10) on the prepared black topped surfaces at 2.5 kg per 10 sqm , heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications. MORTH/Chapter 5 **(Page No 160., I.No.21.7 of KPWD S.R 2015-16).**								
		Sqm							
	Slum board road from Rajivgandhinagar to slum board main road								
	Ch: (0 - 124)								
	Ch: (0 - 124)		1	124	7.00		868.00		
	Cross road-1								
	Ch: (0 - 87)		1	87	5.50		478.50		
	Ch: (0 - 21)		1	21	5.00		105.00		
	From Sambrama college road opp to end road								
	Ch: (0 - 310)								
	Ch: (0 - 310)		1	310	5.50		1705.00		
	1st main from ambabhavani layout								
	Ch: (0 - 358)								
	Ch: (0 - 358)		1	358	6.40		2291.20		
							5447.70	**15.12**	**82369.22**
15	KSRRB M500- 15. Providing, laying **dense graded bituminous macadam** using 40/60 THP capacity H.M.P with Mechanical paver Gr-II(50mm to 75mm), crushed aggregates of specified grading premixed with 4.5% VG 30 grade bituminous binder and , transporting the hot mix to work site , laying to the required level and grade, rolling with wheeled , vibratory and tandeem rollers to achieve the desired density including all leads and lift cost of all materials, labour, HOM of machineries complete as per specifications MORTH Specification No.507 **(Page No 161., I.No.21.17.6 of KPWD S.R 2015-16).**								
		Cum							
	Slum board road from Rajivgandhinagar to slum board main road								
	Ch: (0 - 124)								
	Ch: (0 - 124)		1	124	7.00	0.050	43.40		
	Cross road-1								
	Ch: (0 - 87)		1	87	5.50	0.050	23.93		
	Ch: (0 - 21)		1	21	5.00	0.050	5.25		

Sl. No.	Particulars	Unit / Rate	Nos	L in m	B in m	D in m	Quantity	Rate in Rs	Total Amount in Rs
	From Sambrama college road opp to end road								
	Ch: (0 - 310)								
	Ch: (0 - 310)		1	310	5.50	0.050	85.25		
	1st main from ambabhavani layout								
	Ch: (0 - 358)								
	Ch: (0 - 358)		1	358	6.40	0.050	114.56		
							272.39	**7927.20**	**2159250.37**
16	KSRRB M500- 15. Providing, laying **bituminousConcrete** using **40/60 THP** capacity H.M.P with Mechanical paver Gr-II(30mm to 45mm), crushed aggregates of specified grading premixed with 6% VG 30 grade bituminous binder and , transporting the hot mix to work site , laying to the required level and grade, rolling with wheeled , vibratory and tandeem rollers to achieve the desired density including all leads and lift cost of all materials, labour, HOM of machineries complete as per specifications MORTH Specification No.509 **(Page No 164., I.No.21.22.6 of KPWD S.R 2015-16).**								
		Cum							
	Slum board road from Rajivgandhinagar to slum board main road								
	Ch: (0 - 124)								
	Ch: (0 - 124)		1	124	7.00	0.030	26.04		
	Cross road-1								
	Ch: (0 - 87)		1	87	5.50	0.030	14.36		
	Ch: (0 - 21)		1	21	5.00	0.030	3.15		
	From Sambrama college road opp to end road								
	Ch: (0 - 310)								
	Ch: (0 - 310)		1	310	5.50	0.030	51.15		
	1st main from ambabhavani layout								
	Ch: (0 - 358)								
	Ch: (0 - 358)		1	358	6.40	0.030	68.74		
							163.43	**9822.60**	**1605317.34**
	ROAD FURNITURES								
17	KSRRB M800-13. Providing and laying of **hot applied thermoplastic compound** 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803 **(Page No 181., I.No.24.15 of KPWD S.R 2015-16).**								
	Edge line	**Sqm**							
	Slum board road from Rajivgandhinagar to slum board main road								
	Ch: (0 - 124)								
	Ch: (0 - 124)		2.5	124	0.10		31.00		
	Cross road-1								
	Ch: (0 - 87)		2.5	87	0.10		21.75		
	Ch: (0 - 21)		2.5	21	0.10		5.25		
	From Sambrama college road opp to end road								

Sl. No.	Particulars	Unit / Rate	Nos	L in m	B in m	D in m	Quantity	Rate in Rs	Total Amount in Rs
	Ch: (0 - 310)								
	Ch: (0 - 310)		2.5	310	0.10		77.50		
	1st main from ambabhavani layout								
	Ch: (0 - 358)								
	Ch: (0 - 358)		2.5	358	0.10		89.50		
							225.00	473.04	106434.00
18	Cost towards Design Report and Detailed Estimate,PMC/Third party								8913734.12
19	Cost of Plastic@ 8% of bitumen qty for BC	Kg	1	1843.50				27.00	89137.34
20	Cost towards DLP								49774.55
21	Miscllenous and other charges								445686.71
									1667.28
	Grand Total								9500000.00

Certificate:-

1. That the workspot inspected by me and found work is necessary.
2. That the area comes with in the Bruhat Bangalore Mahanagara Palike Limits.
3. That the rates are adopted based on the PWD SR of 2015-16
4. That the provisions made in the estimate are necessary and quite essential.

Consultant:

For M/s MECADEZ CORE TECHNOLOGIES PVT LTD

Asst. Engineer
Ward No-03
BBMP

AEE
Yelhanka Sub Division
BBMP

Executive Engineer
Yelhanka Division
BBMP